

Future directions for digital literacy development of Indian educators

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INTRODUCTION

The development and diffusion of digital technologies are bringing in significant changes in literacy practices (Warschauer, 2009). The changes are occurring in the way we access, understand, and use information in reading, writing and interacting in our social and professional lives. Teachers these days increasingly face the challenges to make their learners creative and competent users of digital technologies that characterise our lives. They are being trained to use computer and internet as part of their in-service training. They are also being encouraged to take part in seminars and conferences and organise them at their institution. The focus of most of these events is using technologies in language teaching. Hands on sessions are being preferred to presentations. There has been a spurt in the use of social networking sites in India recently. According to one study, 56% of Indian net users do social and professional networking on the web (Mahajan, 2009). It is believed that interactions on those sites helping Indian users to improve their digital literacy and communication skills. No study is available to indicate how the Indian teachers are using them in their social and professional lives. It is believed that such an understanding could be an important step towards a large-scale project for integrating web 2.0 tools in Indian classroom teaching. This study can be seen as one such foundational study. It is exploratory in nature, so it intends to raise questions rather answering them.

DIGITAL LITERACY

In this section I have reviewed the concept of digital literacy and sought to identify the key characteristics of literacies in the digital age. The concept of literacy has changed over the years from the specific ability to read and write and participate in the community of the literate to a set of generic functionalities like 'the ability to identify, understand, interpret, create, communicate and compute, using printed and written materials associated with varying contexts (LAMP, 2004, p2). At the same time, literacy researchers have coined a number of terms to describe new ways of interaction between humans and technologies, such as ICT literacy, Technological literacy, Information literacy, Media literacy, Visual literacy, New literacies etc. There has been overlap between the definitions of these literacies. ICT literacy, for example, included both technical and cognitive skills; technological literacy was conceptualised in terms of the ability to operate, appropriate and synthesize information. Information literacy focused on the ways to access information and evaluate the content, whereas media literacy concentrated on the ability to access, analyse, communicate, and evaluate the construction and interpretation of messages. However, differences between them are so subtle, or similarities between them are so close that some literacy researchers prefer the term 'multiple literacies' (Kellner, 2002, p163) or 'multiliteracies' (Tyner, 1998, p63) to describe the practices. Kress (2003,

2010), however, argued against this tendency. He emphasised the need for drawing up a theoretical framework based on a set of concepts to address a number of issues. The coinage of term 'Digital literacy' is a step towards that direction. Gilster(1997) identified 'a set of competencies' like 'the skill of finding things', 'ability to use these things' in real life, 'ability to think critically' as the key to the understanding of the concept of digital literacy. His definition brings in a major shift in conceptualising digital literacy simply as a set of skills. Martin gave one of the most comprehensive definitions of digital literacy. He defined it as

the awareness, attitude and ability of individuals to appropriately use digital tools and facilities to identify, access, manage, integrate, evaluate, analyse, and synthesize digital resources, construct new knowledge, create media expressions, communicate with others, in the context of specific like situations, in order to enable constructive social action; and to reflect upon this process.

(Martin, 2006, p15)

It includes a reflective element, and this ability to reflect on one's own digital usage can transform one's own practice and also impact on others'. This process of reflection is an ongoing process, as the 'assertion of digital literacy for any person or group is always provisional' (Martin, 2006, p20). Digital literacy is situation dependent, and therefore, acquiring digital literacy is a dynamic process. So Gillen and Barton(2009) point out that we need a broad framework for understanding digital literacy practices as they are essentially varied, and complex. They extend the notion of approaching literacy as social practice (Barton, 2007; Hague and Williamson, 2009) to it and showed interest in examining 'what people do with texts, how they make sense of them and use them to further their own purposes in their own learning lives' (Gillen and Barton, 2009). Gee (1990), Street(1993) studied literacy as 'situated practices' of reading and writing in particular social spaces. Barton (2001) showed how texts change in social interaction; Baynham(1995) studied 'mode switching', the shift between text and talk in social interaction. Warschauer noted how web 2.0 tools and social networking sites are enhancing interactions through blogs, wikis, multi player online games and 'reshaping traditional notions of what constitutes authorship, audience, or textual artifact' (2009, p126).

Literacy researchers have thus identified three major ways which can be extended to understand the nature of digital literacy practices-(1) ways of meaning-making with diverse semiotic resources (Kress 2003; Lankshear & Knobel, 2006), (2) complex forms of networked communication, and (3) as not so recognised practices occurring in home, community, and outside the class contexts while interacting in social networking sites, using web 2.0 tools, and virtual worlds or playing online games. The challenge in the education sector, therefore, is on appropriating new forms of digital representations from learners' and teachers' interactions with new technologies (Gillen and Barton, 2009). This calls for drawing up a framework to understand how teachers are using these new tools, and how the use of these tools and sites are shaping their interactions with friends, students and colleagues, and how they are changing their teaching practices. There is no straight forward way to examine the relationships between these new tools and teachers' digital literacy practices. Digital technologies offer a number of affordances to teachers but admittedly teachers have varied levels of digital literacy. Such affordances are changing the age-old practices of reading and writing, and impacting on the literacy practices. In education they can engage students in collaborative activities, enhance student-student and student-teacher interactions. They encourage them to share personal information, build relationships, and carry forward the discussion beyond the physical space of a classroom to a non- threatening environment.

RESEARCH QUESTIONS

The study sought to find answers to the following questions:

- What are the ways the Indian English language teachers currently using different web 2.0 tools and social networking sites in their social lives, in teaching and for their professional development?
- What are the web 2.0 tools and social networking sites they are using for these purposes?
- How frequently are they using those web 2.0 tools and social networking sites?

METHODOLOGICAL OVERVIEW

To address these research questions I have adopted the following research strategy:-

- a large-scale survey of the digital literacy practices of Indian English language teachers
- a review of articles published on the use of digital technologies in language education in Indian based

The Participants

This study involved 46 teachers of English from the different states of India. Gender-wise 65.22% respondents were males and 34.78% were females. They were between 20-60 years. The data shows that nearly 90% of respondents to this survey are teaching at the higher education educator, and 70% of them are teaching for 1-15 years.

I used web-based survey programme Surveygizmo to design and administer the questionnaire (Dörnyei, 2007). While selecting the types of questions for the survey I drew on Patton's (Patton, M. Q. 2002) 'knowledge questions', 'background questions', and 'opinion/value questions'. The survey included nine questions to understand the background of the respondents (e.g., How many years are you in ESL teaching?), two questions about the purpose of using web 2.0 tools and social networking sites, two questions about the names of such tools and sites used in social lives and their frequency of use, two questions about the names of such tools and sites used in teaching, their frequency, purpose and objective of use, a question about the names of such tools and sites used for continuing professional development and their frequency of use.

Piloting

An initial questionnaire was piloted among two members of the target population to 'see what types of answers respondents produce' (Brown, 2001; Brown and Rogers, 2002), to ensure that the questions are functioning well, and that the research instrument is working well as a whole (Bryman 2008). Because of time constraints, extensive piloting and revision of the questionnaire could not be performed. In order to maximise return rates, the questionnaire was distributed among the Indian language teachers through two mailing lists (ELTeCS and SUETA). Forty seven teachers completed the survey.

ANALYSIS

The selection and frequency of use of these tools and sites were discussed in three sections: their social lives, in their teaching practices, and for professional development.

Social lives

Responses show that Facebook, Orkut, Google Talk, Yahoo Messenger, and Skype are the five most popular tools for socialisation among Indian educators. However, their daily use average of all the tools is just 12.1%, and weekly use average is 24.5%.

Teaching practices

Responses show that Google apps, Wordpress, Skype, Slideshare, and Blogger are the five most popular web tools used in the teaching purposes in India. The average daily use of web tools is as low as only 4.3% which is much lower than the average daily use of web tools for socialisation (12.3%). However, the weekly average use of web tools in teaching is 12.5% compared to 24.5% in social lives.

Professional development

Responses show that Google apps, Blogger, Wikibooks, Wordpress, and Skype are the five most popular web tools used for professional development by the Indian English teachers. However, the average daily use of web tools is as low as only 4.3% which is the same as that of tools used for teaching but is much lower than the average daily use of web tools for socialisation (12.3%). Skype is being used for socialisation, teaching, and for professional development by the Indian English teachers. The weekly average use of web tools in teaching is 11.4% compared to 12.5% in teaching and 24.5% in social lives. Teachers are using almost similar tools and sites for teaching and professional development purposes.

Purpose of use of web 2.0 tools and social networking sites

Teachers were first asked with whom they are using web 2.0 tools and sites. Their responses show the following results:

Item	Percent %
friends and relatives	78.26%
students	69.57%
colleagues	50.00%
I don't use them	6.52%

The results show the higher percentage of use of web tools for socialisation than teaching. Next teachers were asked a close ended question about the over-all purpose of using these tools, and the frequency of use. Results show that these teachers mostly use web 2.0 tools and social networking sites for sharing information with friends and making friends, finding professional development opportunities and interacting with students, sharing class room and project related information. Things they least do include conducting online classes and giving online presentations, training teachers, attending online courses, creating personal websites. Their average % of daily use of these tools for any purposes is as low as 12.3%, and their average % of daily use of these tools for online teaching practice is between 2.6% to 5.1%.

The questionnaire presented the respondents with eight statements in each section about the purpose, and objectives of using these tools and sites in their teaching practices and their frequency of use. They were asked to select all the statements that apply to their contexts. The following table lists the statements related to the purpose of use of these tools in descending order in terms of the percentage of their frequency of use.

Table 2: Purpose and frequency of use: Cross tabulation

Purpose of use	Frequency of use
boost students' confidence in using them	60.53%
give feedback on learners' work	50.00%
create online learning resources	39.47%
design online learning environment	34.21%
training teachers to use these tools training learners to use these tools	34.21%
help learners publish their content	31.58%
training learners in online testing	26.32%

The data shows that teachers primarily use these tools to boost learners' confidence and give feedback. 60.53% use them to help their students gain in confidence, and 50% use them to offer feedback to them. However, online resource development, learning environment designing, helping colleagues to develop their learners, supporting learner's content development are some of the other teaching practices. The following table lists the statements related to the objectives of use of use tools in descending order in terms of the percentage of their frequency of use.

Table3: Objectives and frequency of use: Cross tabulation

Objectives	Frequency of use
how to find useful information or idea	80.49%
expressing oneself through web	63.41%
communicating across cultures	56.10%
fostering independent learning	56.10%
encouraging collaborative learning	51.22%
presenting information to an audience	43.90%
reinforcing skills not learned well	26.83%

The data shows that the teachers use these tools and sites primarily for accessing, and presenting information, self expression, and communication across cultures, and for both collaborative, and independent learning. Teachers were also given the space to mention any other objectives of use of these tools. Some of the objectives identified were: 'communication with students' parents', 'collecting data and conducting interviews' for research, 'online purchase of books', 'sending papers for international presentation'. These are related to the professional development of teachers.

Training received and the effect of training

The quality of training that they mentioned covers quite a broad range, starting from short-term programmes like workshops, orientation on using technology to certificate courses for teachers by IBM, Intel, Wipro, from long-term specialised course in computing by training organisations like NIIT , and DOEACC Society to MA in ELT and Multimedia from the University of Warwick, UK.

The following table presents the gender-wise and age-wise division of respondents who received pre-service and in-service training in computer applications.

Table 4: Gender-wise, and age-wise division of respondents: Cross tabulation

		Pre-service training		In-service training	
		Yes	No	Yes	No
Gender	Male	23%	78%	20%	81%
	Female	38%	63%	40%	60%
Age	20-30	39%	62%	24%	77%
	31-40	30%	71%	25%	75%
	41-50	19%	82%	28%	73%
	51-60	17%	84%	34%	67%
	60	—	—	—	—

Data shows lack of training for teachers even in basic computing across the gender. However, the percentage of males and females having received training both in pre-service and in-service contexts are quite similar. Also 39% of teachers between the age group of 20-30 have received pre-service training which means, according to this data set, around 61% of teachers joining their service are without any training in computing. This made me interested to see whether teaching experience and training are making any difference in the digital literacy practices of these teachers in India. Therefore, first I cross-tabulated years of teaching experience with the use of web 2.0 tools and social networking sites. The results are given below

Table 5: Use of web 2.0 tools and social networking sites and experience: cross tabulation

Years in ESL teaching	Using web 2.0 tools and social networking sites with			
	Friends and relatives	Students	Colleagues	Don't use
Less than 1				100%
1-5	37%	37%	23%	5%
6-10	43%	35%	24%	
11-15	34%	34%	34%	
16-20	45%	34%	23%	

21-25	100%			
25+	43%	43%	15%	

The data set shows that these teachers are using web 2.0 tools and social networking sites with their friends and relatives as much as they are using them with their students. I also did cross-tabulation between use of these tools and sites, people with whom they are using them and also training, pre-service, and in-service to see whether training has made any difference in their use of these tools.

Table 6: Training and purpose of use: Cross tabulation

		Pre-service training		In-service training	
		Yes	No	Yes	No
Using web 2.0 tools and social networking sites with	Friends and relatives	30%	71%	20%	81%
	Students	31%	70%	32%	69%
	Colleagues	38%	63%	31%	70%
	Don't use		100%	34%	67%

The data shows that a significantly higher percentage of users of web 2.0 tools and social networking sites have not received any training. 71% of the respondents who are using them have not received any pre-service training, and 81 % have not received any in-service training. This data raises a very significant question: what is motivating this large section of teachers to use web 2.0 tools in their social and professional lives? I will try to answer this question in the discussion section.

Limitations of this study

This study, however, had some limitations. The most obvious limitation is the sample size of the survey. The data generated from 47 teachers is not enough to generalise its findings.

CONCLUSION

The present study was conducted to explore the awareness and level of use of these technologies among Indian educators so that a need analysis may be conducted in near future to prepare a framework for teacher training both in pre-service and in-service contexts. The study resulted in identifying some of the key digital literacy practices of these teachers, such as boosting students' confidence in the use of web 2.0 tools, giving feedback on their work, creating online learning resources, designing online learning environment, supporting learners to publish their content and training learners in online testing.

It is shown that the use of these web tools for socialisation attracts more attention from Indian educators than their use for teaching and for professional development. The study also reveals that teachers are mostly using two most popular network sites for socialisation. It shows their general lack of interest in using online community sites for sharing pictures and videos. But it reveals that they are more interested to use network sites to create a network of their own, and then to use those information. They have very limited awareness about the possible uses of web-based conferencing tools, learning management system, and virtual worlds. It could be lack of infrastructural resources that are stopping them from exploring them. The study couldn't establish whether training in basic computing helped the teachers' in using these tools. On the contrary, the data set available for this study shows that teachers who are using them more frequently with their friends, and relatives, students and colleagues are the ones who have neither received pre-service nor in-service training. It could be that the use of these web 2.0 tools is a relatively new development, so the users could be the early adopters. It could also be linked to the issue of access. However, investigation of these issues was beyond the scope of this research.

The study indicates that integration of these tools and sites in regular teaching is not a regular feature of the Indian classrooms. Teachers are mostly using them with their students either in informal contexts or for research purposes. The digital literacy practices identified in this study are not collective, rather drawn from the data set of two teachers. However, it gives an indication that instead of serious pedagogic interventions teachers are mostly using these tools for improving their confidence level, power of expression, and facilitate interaction between peers and peers and the teacher. This study notes it as a healthy development given the limited scope of interaction in Indian classrooms, and classroom behaviour linked to social and cultural upbringing particularly amongst those from rural India.

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